



FIG. 3

Docket No. SMI/0005.00

Replacement Sheet

Sheet 7/10

METHOD
STEPS
600

BEGIN:

601: INVOCATION OF THE FLOW CONTROL FILTER BEGINS WITH THE MTA (I.E., A CHILD MTA OF THE ORIGINAL (PARENT) LISTENER) CONNECTING TO THE FLOW CONTROL FILTER (E.G., USING SENDMAIL MILTIER PROTOCOL); THE FILTER ACCEPTS THE CONNECTION.

602: THE MTA AND THE FILTER PERFORM A HANDSHAKE SEQUENCE, INCLUDING FEATURE AND PARAMETER NEGOTIATION. AT THE CONCLUSION OF THE HANDSHAKE SEQUENCE, A NEW THREAD IS CREATED (I.E., IN THE FLOW CONTROL ENGINE) FOR PROCESSING THE NEW CONNECTION/MESSAGE.

603: NOW, THE MTA PASSES TO THE FILTER THE CORRESPONDING CONNECTION INFORMATION (E.G., IP ADDRESS AND HOST NAME) OF THE SENDING MTA.

604: BASED ON THE CONNECTION INFORMATION, THE FILTER MAY LOOK UP MATCHING CLASS DATA FROM THE CONFIGURATION FILE.

605: IN THE EVENT THAT NO MATCHING CLASS DATA IS FOUND, THE FILTER WILL ASSUME UNRESTRICTED ACCESS FOR THE HOST AND THEREFORE WILL ACCEPT THE CONNECTION AND MESSAGE. IN THAT CASE, THE FLOW CONTROL ENGINE THREAD HANDLING THE CONNECTION MAY TERMINATE, AS THERE IS NO FURTHER FILTERING WORK TO BE DONE FOR THIS INCOMING CONNECTION AND MESSAGE; THE MTA PROCEEDS NORMALLY WITH NO FURTHER INTERACTION WITH THE FILTER. OTHERWISE, THE METHOD PROCEEDS TO THE FOLLOWING FILTERING STEPS.

606: THE METHOD TESTS WHETHER CLASS LIMITS HAVE BEEN REACHED.

↓
CONTINUE
TO FIG. 6B
↓

FIG. 6A

Docket No. SMI/0005.00

Replacement Sheet

Sheet 8/10

↓
CONTINUE
FROM FIG. 6A
↓

607: IN THE EVENT THAT LIMITS HAVE NOT BEEN REACHED (I.E., TRUE), THE FILTER INSTRUCTS THE MTA TO CONTINUE AND INCREMENTS THE CURRENT CONNECTION COUNT.

608: OTHERWISE (I.E., TRUE), THE METHOD TERMINATES WITH THE FILTER REJECTING THE CONNECTION AND RETURNING AN ADMINISTRATOR-DEFINED ERROR CODE.

609: IN THE EVENT THAT THE PROCESS DID NOT TERMINATE, THE MTA REPORTS THE SENDER INFORMATION TO THE FILTER; THIS OCCURS IN RESPONSE TO THE MAIL FROM SMTP PHASE.

610: THE METHOD NOTES THE SENDER (I.E., WHO IS THE SENDER) IN THE CLASS. THE ADMINISTRATOR-DEFINED CLASS MAY INCLUDE, FOR EXAMPLE, A SENDER-BASED PARAMETER INDICATING THAT THE FILTER SHOULD NOTE THE NUMBER OF UNIQUE SENDERS THAT HAVE ARRIVED IN A GIVEN TIMEFRAME FOR THIS PARTICULAR HOST (OF THE CLASS).

611: IN A MANNER SIMILAR TO ABOVE, THE METHOD TESTS WHETHER CLASS' SENDER LIMITS HAVE BEEN REACHED.

612: IN THE EVENT THAT LIMITS HAVE NOT BEEN REACHED (I.E., TRUE), THE FILTER INSTRUCTS THE MTA TO CONTINUE AND INCREMENTS THE CURRENT UNIQUE SENDER TOTALS.

613: OTHERWISE, THE METHOD TERMINATES WITH THE FILTER REJECTING THE MESSAGE (RETURNING ANY ADMINISTRATOR-DEFINED ERROR CODE).

↓
CONTINUE
TO FIG. 6C
↓

FIG. 6B

Docket No. SMI/0005.00

Replacement Sheet

Sheet 9/10

↓
CONTINUE
FROM FIG. 6B
↓

614: IN THE EVENT THAT THE FILTERING PROCESS HAS NOT TERMINATED BASED ON SENDER INFORMATION, THE METHOD PROCEEDS TO TEST RECIPIENT (RCPT TO) INFORMATION. THE CONFIGURATION FILE ALLOWS THE ADMINISTRATOR TO DEFINE A CLASS THAT LIMITS THE NUMBER OF UNIQUE RECIPIENTS RECEIVED FOR THAT CLASS, OVER ANY GIVEN TIME SPAN. AS A GIVEN MESSAGE MAY HAVE MULTIPLE RECIPIENTS, THE STEP REPEATS FOR EACH RECIPIENT (INFORMATION) OF THE MESSAGE.

615: AS BEFORE, IF SPECIFIED LIMITS ARE EXCEEDED, THE METHOD TERMINATES WITH THE FILTER REJECTING THE MESSAGE (RETURNING ANY ADMINISTRATOR-DEFINED ERROR CODE).

616: OTHERWISE, THE METHOD UPDATES TOTALS AND PROCEEDS.

617: THE MTA REPORTS THE MESSAGE BODY, WHICH MAY BE TRANSMITTED AS ONE OR MORE BLOCKS.

618: THE METHOD UPDATES A RUNNING TOTAL OF MESSAGE SIZE. THIS INFORMATION IS USED TO DETERMINE THE AGGREGATE TOTAL OF BYTES RECEIVED FROM A GIVEN SOURCE OVER A PERIOD OF TIME.

619: THE MTA REPORTS END OF MESSAGE FOR THE CURRENT INCOMING MESSAGE.

↓
CONTINUE
TO FIG. 6D
↓

FIG. 6C

Docket No. SMI/0005.00

Replacement Sheet

Sheet 10/10

↓
CONTINUE
FROM FIG. 6C
↓

620: THE METHOD COMPARES THE MESSAGE SIZE AGAINST CLASS LIMITS SPECIFIED IN THE CONFIGURATION FILE.

621: AGAIN AS BEFORE, IF SPECIFIED LIMITS ARE EXCEEDED, THE METHOD TERMINATES WITH THE FILTER REJECTING THE MESSAGE (RETURNING ANY ADMINISTRATOR-DEFINED ERROR CODE).

623: OTHERWISE, THE INCOMING MESSAGE HAS PASSED ALL FILTERS AND IS ACCEPTED. NOW, THE METHOD MAY REPEAT FOR OTHER INCOMING MESSAGES.

DONE

FIG. 6D